Implementation of quality assurance and medical audit: general practitioners' perceived obstacles and requirements

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SUMMARY

Background. *The introduction of quality assurance and medical audit has been an important development in general practice. However, the introduction of such programmes does not necessarily mean they are implemented by general practitioners.*

Aim. *A study was undertaken to describe the problems and requirements perceived by general practitioners in relation to the implementation of quality assurance and medical audit in general practice.*

Method. *Interviews were carried out with a stratified sample of 120 Dutch general practitioners. Knowledge, acceptance and application of quality assurance and medical audit activities were investigated, and perceived problems and requirements in implementing quality assurance and audit activities were explored.*

Results. *General practitioners in the Netherlands were generally positive towards quality assurance activities, but had little experience of carrying out such activities. The most frequently mentioned obstacles to implementing quality assurance activities concerned lack of time, colleagues' negative attitudes and fear of assessment and criticism by colleagues. Requirements for implementing quality assurance included having regular meetings with colleagues about quality assurance, having information on the aims and methods of quality assurance, having data from other practices with which to compare performance, having support in data collection, in audit in the practice and in setting up local peer review, and having financial support. The most important factor predicting the actual application of quality assurance activities was found to be knowledge of specific quality assurance activities.*

Conclusion. *Well-designed programmes for the implementation of quality assurance and medical audit, using a variety of different interventions, have to be developed. Such programmes should include the training of professionals in the concepts and methods of quality assurance as well as the provision of financial support for quality assurance activities.*

Keywords: quality assurance; quality in general practice; medical audit; research methodology.

Introduction

IMPLEMENTATION of systematic quality assurance and medical audit programmes is a priority for many professional organ-izations and for policy makers in general practice. Actual implementation depends on the knowledge, skills and attitudes of general practitioners. Doctors need to know how to use quality assurance and audit methods, and to see them as feasible and valuable for their work. An understanding of general practitioners' perceived obstacles and needs in relation to the implementation of quality assurance and medical audit is essential for setting up effective programmes of these activities. Research on this topic is, however, lacking. Studies in Australia,[1] the United Kingdom[2,3] and the Netherlands[4] found that most doctors had a positive attitude to systematic quality assurance or medical audit in general. However, some important obstacles have been identified,[1-4] such as lack of time, fear of abuse of the audit results by insurers or managers, lack of knowledge of the methodology, little perceived benefit for care providers or patients, inadequate methods for data collection or insufficient use of available data, and the view that quality assurance is boring.

Just as in the UK, quality policies for general practice have been developed and offered to general practitioners in the Netherlands since the mid-1980s. Activities include the development and implementation of national standards and guidelines by the Dutch college of general practitioners, the development of feasible assessment tools, obligatory continuous medical education with accredited educational programmes, obligatory peer review in small local general practitioner groups and preparation of a new recertification system.[5] This whole programme should be implemented from 1996 onwards. Studying the reactions of general practitioners to this programme was considered necessary for the further development of effective implementation strategies. The results may also help other countries to learn about the problems and requirements in this field. Therefore, a study was performed to answer the following questions:

- Which quality assurance and medical audit activities are accepted and used by general practitioners and which are not?
- What are the perceived obstacles to using these activities?
- What are the perceived requirements for the implementation of quality assurance and medical audit in the general practice setting?

Method

Sample

A random sample of 300 general practitioners was stratified in three geographical areas in the Netherlands (100 doctors per district). A systematically selected sample of general practitioners was invited for interview in order to make up a study population of 120 general practitioners, 40 from each area.

Interview

Indepth interviews were conducted by three experienced general practitioners who had received rigorous training in interview techniques. Interviewers first mailed an introductory letter to potential respondents and then telephoned them. When general practitioners agreed to participate, additional information about the interview was sent. When general practitioners refused, personal and practice data were collected. Interviews were expected to last between one hour and 1.5 hours.

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The interview followed a detailed protocol with open questions and pre-structured questionnaires. The protocol had been tested in seven pilot interviews. After 64 interviews three questions were slightly changed and one extra question was added. The interview in the main study covered three main areas.

Knowledge, acceptance and application of quality assurance and medical audit activities were explored in a structured questionnaire listing 21 specific activities, scored on three-point scales. General practitioners' knowledge of activities was assessed by asking them whether they were well informed, a little informed or not at all informed. Acceptance was assessed by asking them whether they considered an activity to be useful, slightly useful or not at all useful. Application was assessed by asking them whether they frequently applied, occasionally applied or never applied a quality assurance or medical audit activity. The list consisted of activities related to quality assurance, medical audit and improving practice that are proposed in the reports and statements of general practitioner professional organizations, national boards for quality assurance, the government, insurers and patient organizations.

Perceived obstacles to implementing systematic quality assurance in the work setting were identified using open questions and a structured questionnaire with 10 items, scored on a five-point Likert scale (very much an obstacle, an obstacle, a small obstacle, hardly an obstacle and not at all an obstacle). In the open question section, respondents could identify obstacles in general and obstacles related to the four specific activities which form the core of the quality assurance policies for general practice in the Netherlands. These four activities are use of the national standards of the Dutch college of general practitioners, regular data collection and audit in the practice, group-based peer review and quality improvement, and continuing medical education based on assessments of competence and performance.

Perceived requirements for the implementation of systematic quality assurance activities in the work setting were examined using open questions and a structured questionnaire with 12 items, scored on a five-point Likert scale. General practitioners were asked whether each item would definitely support, would support, would support a little, would hardly support or would not support at all the implementation of quality assurance activities.

Data on personal and practice features of the general practitioners were also collected: age, sex, membership of the Dutch college of general practitioners, involvement in general practitioner training, membership of a general practitioner board, involvment in research, degree of urbanization of the practice, type of practice and size of practice list.

Analysis

The study population was compared with the national population of general practitioners and with the doctors who refused to take part, using the chi square test. Differences with P values of 0.05 or less were treated as significant. Data on the national population were derived from the national general practitioner registration data of 1992 and from data from a random sample of 1007 general practitioners who had participated in a different study.

In order to find relevant dimensions in the two structured questionnaires on perceived obstacles and perceived requirements for the implementation of quality assurance and medical audit, factor analyses (principal components analysis, varimax rotation) were performed.

Multidimensional scaling and hierarchical cluster analysis were used to identify clusters in the actual application of the 21 listed quality assurance and medical audit activities. To explain the variation in the application of these activities, stepwise regression analysis was carried out with dichotomized data (whether or not an activity was frequently applied). Sum scores for the four identified clusters of activities were used as dependent variables. Independent variables in the analysis were: general practitioner demographic features and general practice features, knowledge of quality assurance and audit activities, attitudes towards these activities and perceived obstacles, to the implementation of quality assurance (three 'perceived obstacles' variables as a result of factor analysis). Independent variables were included in the regression analysis when their regression coefficient was significant. A residual analysis was performed to control for influential outliers; such outliers were not found.

Results

A total of 186 general practitioners were approached; 38 refused to take part (20.4%) and 28 did not participate for other reasons (for example, they had moved away or had retired) (15.1%)

A comparison of the representativeness of the sample of 120 general practitioners with the national population of general practitioners and the 38 non-respondents revealed no significant differences with respect to sex, membership of the Dutch college of general practitioners, involvement in general practitioner training, membership of a general practitioner board and involvement in research. However, respondents were older than the population (mean age 45 years versus 43 years). Of the 38 non-respondents, 71% worked in single-handed practices, significantly greater than the 48% of respondents working in single-handed practices. Respondents were more likely to come from rural practices compared with non-respondents (39% of 120 versus 16% of 38) and had a smaller mean list size (2283 patients versus 2548).

Knowledge and acceptance of quality assurance activities

General practitioners' assessments of how well informed they were and the usefulness of 21 different activities concerning quality assurance, medical audit and improving practice are shown in Table 1. Most activities were more or less known, with the exception of making a personal plan for continuing medical education, using facilitators for practice support, using complaint procedures for patients, using patient surveys of the quality of care and making an annual practice report. The majority of respondents considered most activities useful, except for using patient complaint procedures, using patient surveys and making annual practice reports.

Application of quality assurance activities

Most general practitioners had only had limited experience of quality assurance activities (Table 1). The three activities frequently undertaken by the largest proportion of respondents were general practitioners' personal study, having pharmacotherapy meetings with pharmacists and making arrangements in the practice team for quality improvement. Fewer than 10% of respondents had frequently made annual practice reports and a personal education plan, used patient complaint procedures and facilitators in the practice or undertaken practice visits and patient surveys.

Analysis of the application of quality assurance and medical audit activities revealed four clusters:

Use of educational activities. This cluster comprised: educational meetings with pharmacists, personal study, use of national standards for setting criteria in the practice, making arrangements/goals for performance with the general practitioner group, practice team, other primary care providers and hospital consultants, and education in the local general practitioner group.

Table 1. Knowledge, acceptance and application of quality assurance activities.

	% of 120 GPs considering		
	They were well informed	Activity was useful	Activity was frequently applied
Undertaking pharmacotherapy meetings with pharmacists	*97*	*89*	*78*
Undertaking personal study with literature/video, etc	*95*	*93*	*79*
Making arrangments/goals for performance in GP group	*91*	*93*	*51*
Using national standards for setting criteria/goals in practice	*90*	*88*	*54*
Making arrangements in practice team	*82*	*94*	*66*
Making arrangements with other primary care providers	*82*	*78*	*39*
Undertaking education/ training in local GP group	*81*	*92*	*51*
Making arrangements with hospitals/consultants	*74*	*85*	*16*
Undertaking peer review in local GP group	*66*	*83*	*23*
Assessing performance with audio/videotaped consultations	*62*	*64*	*10*
Using computers for audit/feedback/reminders	*55*	*71*	*17*
Analysing data from insurers on production, referrals, etc	*54*	*62*	*17*
Undertaking practice visits/ observation by colleagues	*54*	*55*	*2*
Self-auditing competence/ performance	*51*	*82*	*24*
Auditing charts/patient records	*50*	*68*	*15*
Basing CME on competence and performance testing	*47*	*88*	*11*
Making a personal CME plan	*26*	*71*	*7*
Using facilitator in implementing quality improvement	*26*	*57*	*4*
Using patient complaint procedures	*20*	*37*	*5*
Using patient surveys	*18*	*24*	*1*
Making annual practice report	*17*	*21*	*9*

CME = continuing medical education.

Use of assessment procedures. This cluster comprised: peer review with colleagues, self audit and education based on the assessment of competence and performance.

Use of medical audit methods. This cluster comprised: the use of computer systems for audit, feedback and reminders, analysis of data from insurers and chart audit.

Use of innovative quality assurance activities. This cluster comprised: using audio- and videotapes for performance assessment, making a personal education plan, using facilitators for practice support, making practice visits, using patient complaint procedures, using patient surveys and making annual practice reports.

Perceived obstacles to implementation of quality assurance activities

Table 2 summarizes the clustered obstacles mentioned by the general practitioners in response to the different open questions. Problems were related to the knowledge, skills, attitudes and characteristics of the general practitioners themselves as well as to aspects of the setting in which they worked. The problems

Table 2. Perceived obstacles to implementation of quality assurance activities in the work setting, clustered into 20 topics.

	% of 807 obstacles cited[a]
GP lack of knowledge and skills	
Lack of specific skills	*4.0*
Problem with changing routines	*3.8*
Not informed about QA/audit/not knowing how to start	*3.0*
GP reluctance, negative attitude	
Fear of assessment/criticism by others	*7.7*
Resistance to change, no motivation	*7.6*
Doubt about effect of QA/audit actions	*3.5*
Fear that activities will affect patient care	*2.1*
Problems with nature of activities	
Criticism of audit/recertification	*5.8*
Criticism of national standards	*5.3*
Problem with insurer/patient/government involvement	*5.0*
Criticism of CME programmes	*2.2*
Problem with speed of QA/audit implementation	*2.0*
Resistance in social setting	
Negative attitude to QA/audit among GP colleagues	*10.9*
No support from patients	*1.9*
Negative attitude among specialists	*0.5*
Organizational and practical obstacles	
Lack of time	*21.6*
Problem in locum group	*4.0*
Problem in practice management	*3.3*
Problem in management of CME, peer group review, etc	*3.2*
Lack of financial support	*2.7*

[a]By 120 general practitioners. QA = quality assurance. CME = continuing medical education.

mentioned most often were related to lack of time, the negative attitude of colleagues, fear of assessment and lack of motivation.

Obstacles were identified related to the four specific activities which form the core of the quality assurance policies in the Netherlands. Obstacles were identified concerning the use of national standards. These included criticism of specific standards (for example, one doctor said that the standard for urinary tract infection therapy was not feasible) and difficulties with the systematic implementation of a large number of standards (one doctor said that the large number of new standards was de-motivating). Obstacles concerning data collection and audit in the practice were related to lack of time, lack of skills (for example, one doctor was unable to use the sort of computer programme necessary for data collection) and doubt about the usefulness of such activities (one doctor questioned whether the results justified the enormous investment of time). Obstacles mentioned concerning peer group review were, particularly, resistance from general practitioner colleagues and fear of being assessed by colleagues. For example, one general practitioner was afraid of being criticized by colleagues because it would mean a lack of knowledge or skills, and another general practitioner remarked that it was difficult to demonstrate one's performance to others. Finally, obstacles related to continuing medical education based on assessments of competence and performance were criticism of the assessment methods and fear of being evaluated. For example, one general practitioner questioned the competence of the assessor and another remarked that having others evaluate one's performance was threatening.

Answers to the questions in the structured questionnaire revealed that the most important obstacles to implementation

perceived by the general practitioners were: the extra burden on the practice (46.7% saw this as a problem), the lack of quality policies in the work setting (33.3%), the limited collaboration with colleagues (28.3%), the extra time and money required (27.5%) and the lack of knowledge and skills in quality assurance methodology (25.0%)

Factors analysis showed that three factors explained 53% of the variance in the answers. These were: obstacles related to the skills and attitudes of the general practitioners (not knowing how to manage quality assurance and doubt about its effectiveness and feasibility); obstacles in the setting (no quality policies in the region, lack of collaboration with colleagues, colleagues in the practice being negative about quality assurance); and practical obstacles (lack of time, money and staff and the extra burden on the practice).

Requirements for implementation of quality assurance activities

The general practitioners identified a number of requirements for the implementation of quality assurance activities such as more staff, better organization of and collaboration in the local general practitioner groups, better organization of continuing medical education in the region and support in the computerization of the practice. The requirements mentioned most frequently in the structured questionnaire are shown in Table 3. The need for regular meetings with colleagues on quality assurance and for adequate information on the aims, background, plans and importance of quality assurance were cited most frequently.

Factor analysis showed that three factors explained 47% of the variance in the answers: educational support (information and training on quality assurance); support in data collection and evaluation of care (support in meetings with colleagues, in setting up peer review and practice audit, in computerization, and so on); and formal support (financial support, laws and regulations and contracting).

Fifty six general practitioners were also asked for their opinions on whether quality assurance activities should be made compulsory. An obligation to undertake quality assurance activities coming from within professional organizations was judged positively by 37.5% of general practitioners, negatively by 37.5% and 25.0% showed mixed feelings. However, an obligation to undertake quality assurance resulting from contracts with insurers was evaluated positively by 12.5%, negatively by 55.4%, while 32.1% had mixed feelings.

Factors predicting involvement in quality assurance activities

Results of the stepwise regression analysis determining which factors predicted involvement in quality assurance activities are shown in Table 4. For three of the four clusters of activities, knowledge of the specific activities proved an important predictor. General practitioners carried out more educational activities the less they experienced obstacles in the work setting (obstacles such as lack of collaboration with colleagues or colleagues' negative attitudes). Being involved in policy making for general practice by being a member of a general practitioner board and working in a group practice or health centre predicted use of innovative quality assurance activities. Working in a single-handed practice predicted the use of assessment procedures, such as self-audit and peer review.

Discussion

This study shows that general practitioners face a variety of problems and obstacles when they consider implementing systematic quality assurance and medical audit in their work setting. There is probably no single solution to this; a variety of approaches will be necessary in the organization of such an implementation. Of course practical problems, such as the need for extra time, money, staff and facilities, play an important part. It is clear that without financial and structural support quality assurance will never achieve a permanent place in general practice. However, there are other important obstacles and requirements.

From the interviews and regression analyses it was clear that information about various quality assurance and audit methods, and instruction in how to use them, are important factors in their implementation. Training programmes to teach general practitioners and practice staff the necessary knowledge and skills are urgently required. Medical students and general practitioner reg-

Table 3. Perceived requirements for the implementation of quality assurance (QA) activities.

	% of 120 GPs who considered action (very) supportive in activity implementation
Regular meetings with colleagues on QA	*79.2*
Information on aims, background, plans, importance of QA	*75.8*
Data on performance compared with data from other practices	*69.2*
Support in data collection and audit/ assessment of care	*68.3*
Support in setting up peer review in GP groups	*66.7*
Financial support/reimbursement for QA activities	*60.0*
Support in computerization in the practice	*59.2*
Education/training in concepts and methods of QA	*56.7*
Formal regulations from the professional organization	*46.7*
Contracts with insurers, with arrangements for QA	*42.5*
Feasible laws with respect to QA	*42.5*
Arrangements with patients (organization) for QA	*15.0*

Table 4. Stepwise regression analysis results of factors predicting general practitioner involvement in quality assurance activities.

Activities cluster and explanatory variables	β
Use of educational activities; $R^2 = 0.43$ ($n = 109$)	
Being well informed about activities	0.44
Perceiving fewer obstacles in work setting[a]	0.35
Finding activities useful	0.23
Being a member of the Dutch college of GPs	0.17
Perceiving more practical obstacles	0.16
Use of assessment procedures; $R^2 = 0.28$ ($n = 112$)	
Working in a single-handed practice	0.51
Perceiving problems in work setting	0.16
Use of medical audit methods; $R^2 = 0.19$ ($n = 112$)	
Being well informed about activities	0.43
Use of innovative quality assurance activities; $R^2 = 0.48$ ($n = 111$)	
Working in a group/health centre	0.54
Being well informed about activities	0.24
Being a member of a GP board	0.17

n = number of respondents. [a]*That is, collaboration with colleagues.*

istrars (vocational trainees) should learn the basic principles of quality assurance during their formal training.[6,7] Another important obstacle lies in the lack of collaboration between care providers in the practice team or local setting. This study underlines the crucial importance of teamwork and good collaboration for quality assurance in general practice, as suggested and found in other studies on quality assurance methods, such as the north of England study on standards and performance in general practice[8,9] and the studies on peer group review performed in the Netherlands.[10,11]

To guarantee representativeness in the present study, potential participants were approached in a random and systematic manner. This seems to have worked well. The use of experienced general practitioner interviewers probably contributed to a good response rate (only 20% refused) and also to the general practitioner respondents feeling free to express their opinions in the interview. It could be expected that the results provide a much more valid picture of the views, concerns and needs of general practitioners than is usually gained through postal questionnaires. Validity was improved by giving the doctors the opportunity to react spontaneously to open questions and by following up their answers in order to explore further their feelings and views. Specific quality assurance activities were explained to the general practitioners to guarantee a good understanding of the questionnaires and to promote reliable results.

In conclusion, this study provides a representative picture of the attitudes, experiences and requirements of general practitioners with respect to quality assurance and medical audit in a country that has had specific quality assurance policies and programmes in general practice for between eight and 10 years. General practitioners in the Netherlands were generally found to be positive towards quality assurance and were aware of many of the proposed activities. They did not, however, have specific experience of carrying out most of the activities and were therefore in need of support in this process. The implementation of quality assurance systems in general practices can be compared to the implementation of clinical guidelines: a well-designed strategy, with a combination of different interventions, will be necessary to be effective.[12,13]

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Patient-held medical records in Lesotho

THE capital cost of medical records and their storage systems is considerable, the space they take up is immense, and the amount of staff time used in filing and retrieving them is huge. These factors can only be justified if they can always be found when needed and the contents are accessible and accurate. Patient seen in hospital accident and emergency departments, on house calls (especially out of hours), and even in hospital outpatient departments, have a high likelihood of being seen without access to their medical record. Furthermore, the larger the health care facility, the more vulnerable such records are to unauthorized inspection and to breaches of confidentiality. All of these features of conventional medical records make the idea of patients keeping their own records worthy of careful consideration.

The objections to such an idea are mostly founded on the belief that patients would lose their records, and to a lesser extent on doctors' reluctance to have patients reading what they have written about them, despite the fact that the information, if valid, belongs to the patient and, if invalid, would be subject to correction by that patient. This study refutes these objections.

Patient-held records have been in use for 20 years in Lesotho, a largely rural third world country. Seven hundred people were interviewed, of whom half had more than one hour's walk to reach a health care facility. Of these, 89% preferred to keep their record themselves, and 83% felt that the information in it was theirs and that unauthorized people were less likely to read it if it was patient-held than if it was kept in the health care facility. Interestingly, while 32% of the sample worried about unauthorized people reading their record at home, 41% said that they would allow others, of their choice, to read it.

Forty one per cent of nurse clinicians and 36% of doctors estimated that people failed to bring their record more than 20% of the time. In fact, only 29% of people remembered ever having attended without their record.

More than 80% of the doctors and nurses in this survey felt that patient-held records prevented unnecessary repetition and prevented mistakes. In total 85% of nurses and 51% of doctors felt that if patients hold their own records they have increased responsibility for their own care, and 59% of nurses and 36% of doctors thought that patient-held records improved compliance.

If poverty stricken people in a developing country can keep, value and use their own records, generating in their carers respect for patient responsibility, should we not be prepared to learn from this work as a way of reducing the costs — financial, human and structural — of a paternalistic system?

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Source: Henbest RJ, Germond T, Fehrsen GS. 'I keep my health book with me': a national survey of 20 years' experience of patient-retained medical records in Lesotho. *S Afr Fam Pract* 1995; **16:** 80-94.

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